

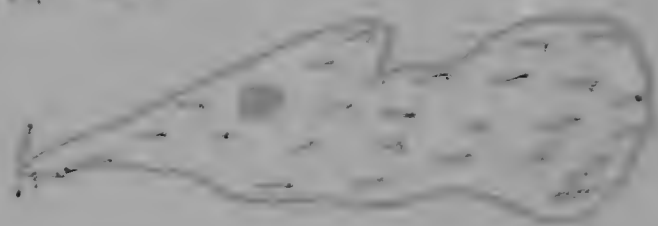
"*Revised*"

WEATHER

LEV. 100

Mo. 10

oh-bec-doh-bec



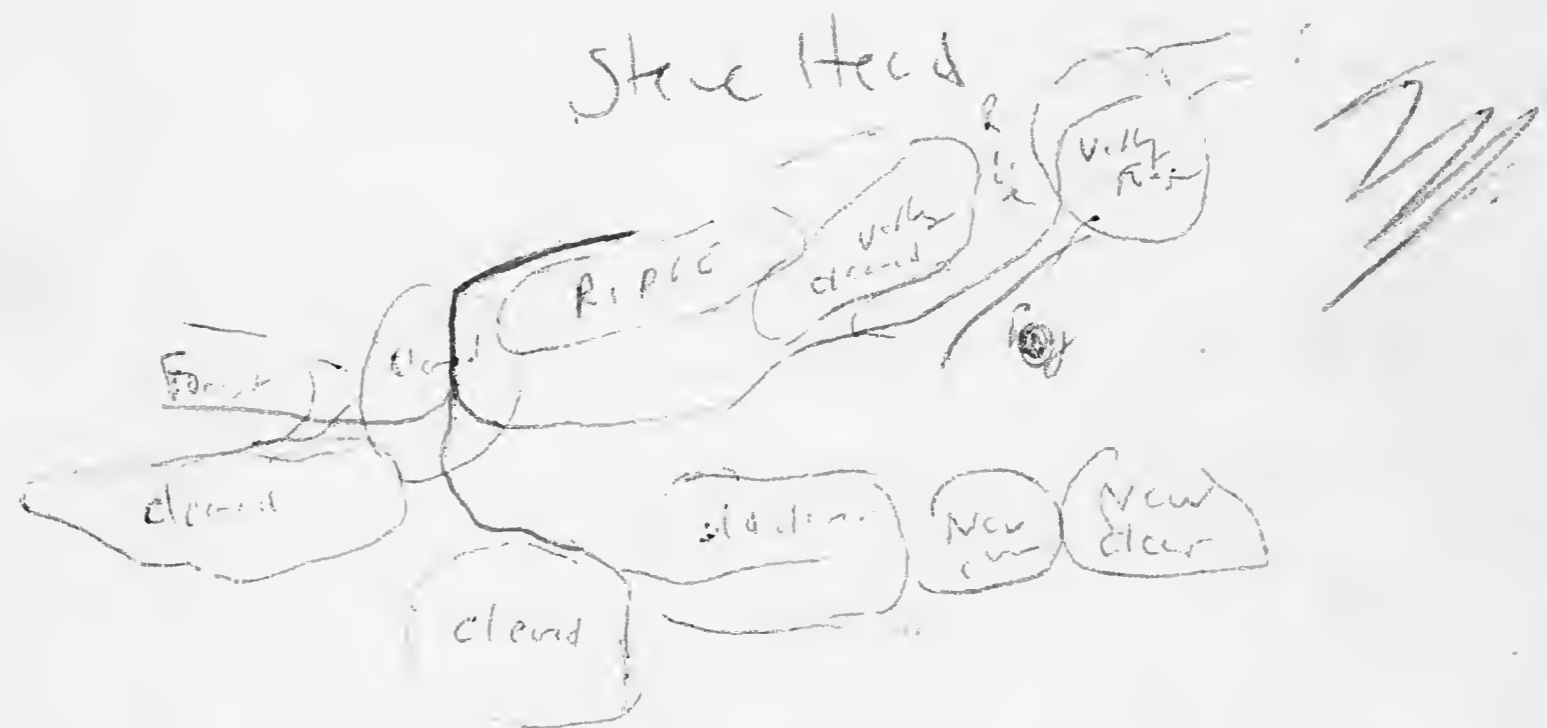
# DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING Roadway of any Width, Side Slopes 1 1/2 to 1

In the figure below, opposite 7 under "Cut or Fill" and under 3 under "Dist." the distance out from the side stake is 10.7. Also, opposite 11 under "Cut or Fill" and under 7 under "Dist." the distance out from the side stake is 10.7.



	0	1	2	3	4	5	6	7	8	9	
Distance out from Side or Shoulder Stake											
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

"Brady"  
Curbell  
March Chambers



"Retain the Rain"  
WEATHERPROOF

a product of

**J. L. DARLING CORPORATION**  
TACOMA, WASHINGTON 98421 U.S.A.

January 4th 1984  
Rockland Feeding station  
830-1230

Walked down path below House  
that turns into an old road bed +  
descends through valley to an old  
quarry.  $\approx 3\text{km}$ ?

Road goes through 2nd growth  
Limestone forest 30-40' tall.  
but much of it is cleared  
back from the road.

On the way, back I bushwhacked more -  
goes up on hills. it was  
there I saw the only Worm-eating  
Warbler in 25' up - but only  
briefly as it came in alarm chipping  
to my pishing + left.

Ruddy Quail Dove  
White-crowned Pigeon  
White-winged Dove  
Jamaican Mango  
streamer. 1

Jamaican Becard

Loggerhead Kingbird

Greater Ant. Wren

Jamaican Woodpecker

~~Ant. Wren~~ Jamaican White-eye

Arrow-headed Warbler

White-chinned Thrush

Orange-capped

Jamaican Tody

Jamaican Oriole

Greater Ant. Wren

Saffron Finch

Stripe-headed Tanager

Jamaican Sparrow

Yellow-crowned Elaenia

Caribbean Elaenia

Yellow-faced Grosbeak

Yellow-shouldered Grosbeak

Parula Warbler

4

Brw Warbler

2

American Redstart

2♂ + 3♀

Black-throated Blue Warbler

5♂ + 4♀

Prairie Warbler

2

Worm-eating Warbler

1

- no data

but was alone - interruptedly

The Arrow-headed warblers were in the forest understory - relatively deliberate (compared to the Elfin Wood Warbler). 7 were on a dead tree trunk - but also on the ground.

230-530

I hiked back down into  
land behind Rockledge. And up a  
track to old house sites.

Along road - in forest edge I  
saw 2 Arrow-headed warblers, &  
1 Black-throated Blue & 2  
Yellowthroats.

I hatched along the  
forested slope - & saw a  
\* Warmer - briefly hopped & probed into  
a leaf curled leaf 10' up to 30'  
fence (6" long leaf). It  
was solitary.

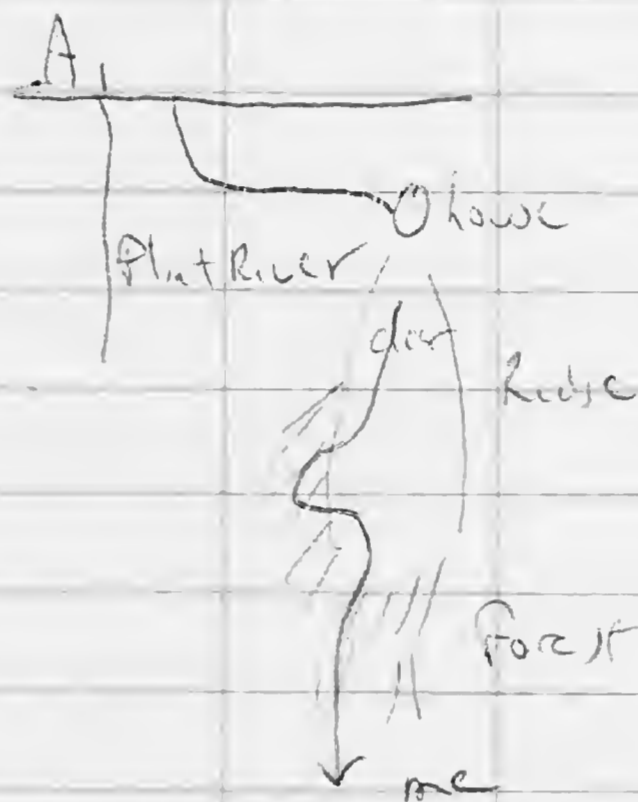
I hiked on Lywood Road &  
down the washed out road behind  
her house & had little luck.

Arrow-headed warbler was in dense  
disturbed foliage - it was prying  
bill between leaves.

January 5

830-1200

Flint River Estate



First let me talk about the warmers.  
I saw one in a curled broad  
leaf <sup>10' up</sup> near the edge of the  
forest - it was solitary in all  
circumstances of the bird - it had a  
7mm grub in bill. It got known  
from det notes.

The 2nd was well into forest on  
ridge top - ~5' up - no foraging note.

Stop 1

2 C. ...  
2 ...  
1 ...  
3 ...

130 - 330 Jan 5 J I  
checked out very dry limestone  
forest at Nesril along Road beyond  
the lighthouse. The "Soil" was  
pure limestone bedrock - the trees  
mainly microfolias - with some  
palmeto undergrowth & occasional  
vine-tylers -

Residents included White-eyed Vireo  
T. Ooble  
Bullfinch  
seedcater  
S. headed flycatcher

But mainly there were small mixed  
species birds of warblers usually  
consisting of Btw, Redstart & Pewee -  
a number of ovenbirds were also seen  
I warmer (next page).

2nd stop at Nesril Day ...

Jan 5 25-30 1911

... plastic ...  
...  
...  
...

... 5 ...

...  
...  
...  
...

...

...

...

... 5" sp

...  
...  
...

...  
...

0.8 100000

0.8 100000

0.8 100000

1/2 cent Bon. to 1/31 3 30 1-17

40 2nd growth units

60

100

100

100

100

500

100

3mm thru p or b

100

100

100

100

100

60

100

40

200

100

100

13mm thru spec 1b

100

20

50

600

100	2 actung 1b	50
	Ban mark 1b	100
50		100 2mm "mud"
50	2 x 3mm th. sp. 1b	50
	4mm green sp. 1b	
100		20 2mm sp. 1b
100	4 x 2mm sp. 1b	100
	2 x 4mm long nymphs (green) 1b	
2000		100
100	4mm 1st sp. 1b	70 3mm th. sp. 1b
	3mm th. sp. 1b	100
100	4mm 1st sp. 1b	50
	2 x 3mm sp. 1b	20 5 x 2mm long
100		2mm mud 1b
75		3200
100		100 4 x 3mm long
60		100 4mm sp. 1b
2000		100 2 x 2mm long
		100 1mm mud

Morning of June 5th continued  
 as it slightly left. It was  
 in association with B+W Warbler,  
 of Redstart & Jamaican L E Wren.

Also on this line I had  
 3 or so pairs of Arrow-headed  
 warblers - which died lat probe  
 ~ 50% of the time (all small 4"  
 leaves 25-30' up.)

3-4 White-eyed Wrens  
 Yellow-crowned Elaenia (Forest edge)  
 Jamaican Oriole 6  
 S. headed Tanager 4  
 Bullfinch  
 Duck-bird 3-4  
 B+W Warbler 3-4  
 Redstart 20  
 Manakin Warbler 10 in forest  
 Gold Flycatcher  
 B-tailed Flycatcher  
 Jamaican Woodpecker 2

100

June 6 830 - 130

50

Windy cool

50

I hiked short cut to the  
old salmon Homestead, then a  
second short cut to Anchovy Main

100

Road. I then hiked a road  
past secondary school into hills -  
but found little accessible forest

100

so I returned to short cut  
from Main Road to homestead.

2000

This morning I saw no  
worms at all. I saw 5-6

100-

Ovenbirds 5 B+W warblers, 1 flame  
2♂ + 2♀ BTB warblers - all warbler

100

solitary (with other species) 2♀  
1♂ Redstart (all solitary)

100

♀ Jamaican Becard  
several G. Antillean Pewees

75

I worked Hillock tops & slopes  
oh yeah - I saw 1 pr of


100

Arremonodactylus Warblers - 1 flycatcher x 2

65  
25

230-530

I worked slope below  
Logland Road below the  
house. One slope has  
luxuriant forest - with larger trees &  
40-50' canopy (2 dry stream beds) -  
wind was up & I saw few  
birds. (Ruddy Quail Doves)  
I saw 2-3 B+W warblers -  
3 ovenbirds, ♀ BT Blue warbler  
Yellowthroat ♂ & Redstart ♂.

10  Live insect (cons-)

51 1000 Limestone forest - dry  
50 gully sunny

10 50 2x 4mm spiders (green) 1b  
1mm hump bump 1b

10 25 3mm yellow + black spider 1b

20 5 5mm thin spider seen 1b  
2mm green spider 1b

10 30 3mm spider 1b

10 40 4mm green spider 1b

10 95 2mm green hump 1b

2 45

2/5 35 2x 2mm green spider 1b

35 5mm thin green spider 1b

45

35 2x 1mm thin green spider 1b

25

50 1mm green spider 1b

50 5mm thin spider 1b

60 2mm spider 1b

50

80

38

50

25 5mm spider 1b  
2mm spiders } 1b  
3mm spider }

50 3mm spider 1b

40

100

1000

130 3mm wood hop lb  
 3mm 1st spider 1 lb  
 100 2mm black + yellow spider lb  
 3mm thin green spider lb  
 100 4mm green spider lb  
 85 1mm beetle lb  
 30 4mm thin black spider lb  
 50 2mm black spider on leaf lb  
 100  
 15  
 1500

50  
 70 3mm spider 1 lb  
 100 4mm spider lb  
 100  
 100 3mm spider lb  
 150 4mm spider lb  
 105 3mm spider lb  
 100 2 x 3mm spider lb

Total	Prey	Grasshopper	Loss
32 spiders	19 spiders	0	0
3 homoptera	1 chrysalis		
1 beetle			
14/1,000 leaves	8/1,000 leaves		
	95% spiders!		

32/35 = 1 lb  
 95% lb

Live leave count #2  
fly hatched - not a flycatcher  
smaller than 1st

12 2mm fly

60

14 2mm fly

30

50 2mm fly

50 2mm fly

10 2mm fly

22

40 2mm fly

45

40

50 2mm fly

50

50

50 2mm fly

20

20

70

37

40

50

50

50



Single \$

month

Stock

Number

7

0

8-100

6

6

0

8-100

5

4

0

0

3

4

0

0

0

6

2

1

0

4

1

4

5

4

5

0

5

8

5

4

4

5

6

4

4

2

0

0

4

2

0

0

4

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4

5

0

0

4

8

0

0

4

4

0

0

4

8

0

0

4

3 m. 600

4

June 7 warmer breezy in afternoon  
Rockland Fielding Station

~~830~~ 630-730, 830-245

I worked wood slope below  
to north of station. I  
saw few workers in the woods -  
no workers all day. 2-3 Redstarts,  
1 ♂ + 1 ♀ BB, 2-3 Black-chin  
I mostly collected + counted leaves

June 8 - Windsor Cove area  
830 - 300.

I hiked trail into Cockpit  
country. The trail winds at  
the base of the Hilllocks &  
eventually up a gorge & along the  
side of a Hilllock. Each Hilllock  
is tall (several hundred feet)  
& steep sloped, with a bedrock  
of limestone & limestone talus  
making walking very treacherous.  
On the slopes of the  
Hilllocks was undisturbed  
limestone forest - 45-50' - open

understory. Mostly small & medium  
size leaves - few disturbances -  
few coded leaves.

At the edge of each Hilllock  
was a sort of very vegetation  
which covered trees & contained  
lots of dead leaves. Here I

Saw most birds including 7  
Worm-eating Warblers.

The first Worm-eater was, in fact,  
the first bird I saw, <sup>30</sup> but  
was used to disappearing quickly into  
a Hilllock.

The 2nd was perching in leaf down-  
a high in a tree - it then moved  
into dense & very vegetation to feed  
from small dead leaves, as well  
as green at a twig. It was  
with D. W. E. vireo, Redstart  
& ~~2~~ Purple Warbler.

The third Worm-eating Warbler  
appeared briefly low - 10'  
in dense vine tangle at base of  
Hillack.

I climbed a Hillack & saw  
few birds (Tody, Crows, Jamaica  
Woodpecker).

The trail turned up a gorge  
lined on both sides by dense  
trees draped in vine vegetation.

In a 1/2 km stretch I  
saw 4 worm-eaters. At the I  
got foraging data on 3 of them.  
(That makes 6 individuals ~ 27  
maneuvers). The wormers probed  
into tree crotches by hanging a lot -  
over hanging upside down alternative  
sites included large crotched trees  
& a yellowed off tree in leaf.

Other birds did not forage as  
well. I saw a number of  
Brown warblers - I at least one  
probed into dead leaves when

moving in very dense vines.  
I saw a Jamaica Oriole did not  
probe as well.

I saw 2 ♂ BTB  
2-3 ♀ BTB  
4-5 Parula  
6 B+W warblers  
5 Yellowthroats  
7 warblers  
1 Umbird.

In addition I saw 2-3 prs  
of Arrow-headed warblers (in  
dense vine tangle)

2 Blue Mountain Vireos  
2 Chestnut-bellied Cuckoos  
Jabbering Crows

I saw a flash of Parula  
flying in.

\*

† The last few wormers  
were closely associated with  
warbler groups in area.

They surprise me how fast  
& actively they forage.

Jan 18 - Hardware Cap, Blue Mtns.

After spending most of a day  
figuring out what to do about  
soaked binoculars - I managed  
to get into the field 3:45-6:00pm.  
I went on several of the shorter  
trails on the Hollywood Garden  
proper. The trails traverse patches of  
intact forest & cleared areas overgrown  
with ferns.

The most common migrant I  
saw was Black-throated Blue Warbler  
of which I saw several  $\text{qq}$  (I  
saw a very tame  $\text{q}$  - which hangs out  
near the porches, to the cabins - it  
blows "Neophobie" pretty badly - it  
came up next to me & ate some  
Banana.

I saw several Brw, & Ovenbirds, &  
I Parula.

Common residents include - White-throated Thrush,  
White-eyed Thrush (2), a whistler in  
the evening that I take to be

Red-throated Solitaire  
Jamaica Woodpecker  
Belted Kingfisher  
Stripe-headed Tanager  
Orange-capped  
Belted Kingfisher  
Yellow-shouldered Grosbeak  
White-capped Vireo  
Arrow-headed Warbler (a few)

January 11

I hiked on the very local trails  
in the Hollywood land, 645-1030  
from 1100-900 I went up the  
ridge across the main road to  
Woodcutters Gap

I saw two WFW on the  
local summit trail. One I saw  
briefly - it settled too deep in leaves  
the second I saw after I walked  
into first undergrowth & stood quietly -  
it then came flying in. I got  
a lot of foraging data on slope

It hung out in Tree Ferns a lot -  
probing at old fronds, sitting dead  
fern leaves & probing at dead curled  
leaves caught up at the base of the plants

I saw 3-4 Black-throated Blues

Both WFW were solitary

2 ovenbirds, 1 Yellowthroat  
no Redstarts.

The trail up to Woodcutters  
Gap goes through forest all the  
way 1.5 miles. or so.

I saw 2 pairs of Neospiza  
(you can hear them foraging at  
epiphytes - one finished with an  
epiphyte & dug around at bark  
I also saw a Crested Quail Dove &  
a Jamaican Lizard (Cuckoo)

On the walk I saw perhaps  
6-7 B.T. Blues (all ♀♀!) 3-4  
BW warblers, a Yellowthroat & a -

the way back I saw a  
Swainson Warbler land briefly on  
a log in the trail.

Now, as for worms. I  
got good looks at 3 - but  
forgot data briefly (1 minute) -  
only one. 2 - others were  
30' & 10' up in "Knops"  
trees & down immediately.

I'm pretty certain I heard a  
saw flicker at 2-3 more.  
[The reported sight notes seem  
to be distinctive - like Merly & Roscoe.  
This bit, me up to 19  
WEN (but data on only 9).

I will try the trail again tomorrow.

June 12 - Insects & other

11:00 AM

Blue Man

35 3mm green spider - 1b

30 " " "

60

50

80

70

30 3mm green spider - 1b

5 4mm " "

40 " " "

40 2mm wasp 1b

50 3mm wasp 1b

50

80 ? on green spider 1b

4mm " 1b

70

50

75

10

20

10

5mm green spider 1b

3mm " 1b

15 - 3mm spider

1000

80

50

3mm green spurt

80

70

120

60

4mm green spurt 1b

50

3mm

70

11mm

1500

60

3mm green sp 1b

2mm

120

2mm green spurt

100

50

10 -

2 x 4mm green spurt 1b

40

100

100

40

110

80

3mm green spurt 1b

140

2mm skin spurt 1b

55

11mm

1550

75

120

70

20

120

3mm skin 1b

80

3670

40

21/1000

January 12 - Hardwar Gap - Jamaica  
700-1800

I hiked up ridge trail to Woodcutters  
gap 700-1200 & went beyond on  
trail to Catherine Peak for another hour.  
The fog came in so I started insect  
counting on the way back. I  
came back by a trail from  
Woodcutters Gap to Green Hill.

On the hike I saw no less than  
25 Black & white warblers, but only  
2-3 of B.T.Bs. The slope on  
the ridge towards Green Hill is  
decidedly shabbier & in the area  
where the trail goes through  
wet shrubbery I saw 3-4 ovenbirds  
(the chickadees 2-3 yellowthroats in  
the fir Banks).

In addition I had a lot of  
"sp" Redstarts.

I'm getting a bit confused  
about Swainson & Worme's  
Warblers - both have loud

explosive chirps & the repeated sect-sect-sect.  
I actually saw 5 wormers &  
4-5 Swainsons today, with  
a couple of unidentified loud  
chippers.

The Swainson's came out boldly  
to perching & sit on logs near  
the trail looking at me, - but  
of course I never see them  
forage.

I found the wormers today  
by listening for the flight  
notes. I got foraging data  
on 3 wormers (all this is  
on tape).

The first was probably at <sup>small</sup> dead  
leaf or fern leaf - the other 3 -  
on the "backside" of the mountain  
checked mainly twigs & branches &  
a couple of small leaves.  
only 1 of the 5 was associated  
with other birds.

As usual they turned  
quickly & accurately & dropped

away into understory upon  
disturbance nevermore to be  
seen.

I saw several Crested gnat Pours -  
2 of the Ruby-throated Solitaires -  
a Lincoln Oriole (back stopping)

lots of Arrow-headed noddies,

& W. C. Thrushes, Juncos, & J. L. Eys  
Vireos.

73

January 13 In the morning  
Blue Mountains

Ferry Glides Area

75

75

50

100

90

40

90

25

55

55

45

70

100

60

62

60

1000

55

41

40

20

40 - 4mm grain spruce 1h type A

90

40

30

10

4 spittle bugs 2mm

30

100

80

100

1700

80

21

21

82

115

60

10

2000

January 13 - Hedgesburg

It was a mainly dreary day  
that followed a windy night.  
mist came on & out until about  
2.00 when fog passed clear.  
I conducted the 1st - last - in snow

climbs & went up to the  
top (Hedgesburg 6p). The

vegetation was very wet &  
I didn't go on grassy trails.

Basically, I saw no

Wrens. I saw fewer

birds in general (5-6 Bluebirds)

1 ♀ BTB. ) B + I

did not go to a few (5-6)

Swainson's Warblers

January 14 - Hedgesburg

I worked up some trails.

At beginning of trail (to

just beyond Perry Glade)

I collected dried leaf samples

(4)

In general. One hour are  
quite scarce & it took me  
100-200 m to complete each  
traverse. The results indicate  
that these are small & have  
relatively few arthropods as well  
from being blown up. I  
collected birds. One even I  
saw 5-6 Swainson's Warblers.

1 Starling. 2 Redstarts &  
3 - 100% - 3 Worm eating  
Warblers. I actually got stuck  
on 2 of them. One the  
first (up top) whereas the third  
~~was~~ dropped into the  
undergrowth upon which I  
was standing. I saw a lot of other  
birds well.

I left at 2:00 7:00-2:00 &  
to drive back to Dining Bay  
via Bull Bay.

January 15. I went to the  
wilder Estate 7:5-12:45.

It was raining very hard  
begin to rain as I left.

I went to end of small road -  
as on my last trip - but I  
walked a different trail  
which ~~was~~ was led by several  
hills & large areas of  
disturbed very vegetation as  
well as more mature forest.

I found 9 WEW - all  
but I were in edge vegetation -  
but one was up in the canopy  
of taller forest (until now  
since disturbed). (see tape  
transcripts for more notes).

In addition to the Wormers  
I saw 4-5 Ombirds, 6-7  
Red Warblers, 15 Blue-winged  
Warblers, ♂ + 3 ♀ BTBs, 2  
Redstarts, & 5 Yellowthroats.

I also saw <sup>several</sup> ~~black~~ <sup>black</sup> ~~hated~~ <sup>hated</sup> ~~parrots~~ <sup>parrots</sup>,  
 & several chestnut-bellied ~~parrots~~ (the  
 seem to be in pairs at + times) &  
 1 ~~Immature~~ <sup>Immature</sup> ~~Booby~~ <sup>Booby</sup>.

January 16 730-1230

Windsor (over) Area. On this  
 trip I parked at Windsor  
 Great House. I walked up  
 trail towards (over) it was a  
 beautiful day. The first bird I  
 saw when I hit the forest  
 edge was a WEW. The  
 trail I found appeared to be  
 (which I did not want) & went  
 along a ridge in undisturbed  
 forest & down along a ridge.  
 Not until the soil did I  
 get into a valley with more  
 disturbance. I still saw 7 WEW  
 many in little disturbed areas.

Dear Lat Samples collected  
 On-trail to Catherine's Peak  
 January 14 1984 - clear-to  
 misty 800<sup>am</sup> - 1100 pm

Sample 1  
 Leaf size

4	4	4	3	3
3	2	4	3	3
1	2	2	3	4
6	3	2	8	4
4	4	5	4	3
4	5	3	4	3
2	1	3	3	3
3	4	3	2	1
2	3	4	2	0
3	10	4	2	
3	Pen-10	4	1	
3	3	3	1	
3	4	8	1	
1	4	4	4	
4	3	4	3	
5	3	8	1	
1	3	4	1	
	4	4	1	

Insects  
 1.5 cm cricket  
 4 mm cricket  
 1 cm cockroach (fry)  
 3 mm }  
 4 mm } bug  
 2 mm spider  
 6 prey items/100  
 4 mm cricket (over)

# Sample 2

4	3	1	3
4	3	1	2
2	3	4	2
3	4	1	2
2	4	5	2
4	4	5	1
4	3	2	1
4	4	3	
4	4	3	
3	4	3	
2	4	3	
3	1	3	
1	1	3	
2	1	3	
4	1	3	
1	6	1	
1	7	1	
3		3	
3			

Insects

3mm coarsh

3mm spider

4mm hemiptera

2 x 2mm hemiptera

2mm spider

4mm cricket

3mm mite

4 prey items/100  
(over)

# Sample 3

10"	4	5	5
3	2	5	2
4	2	4	8
3	2	4	4
4	1	4	6
4	8	4	4
4	3	4	1
1	1	4	4
Prm	1	2	3
4	1	2	3
2	3	3	2
2	3	3	2
3	4	3	1
3	3	2	3
2	3	2	3
5	3	2	3
3	8	1	3
3	8	1	2
2	6	1	2
2	3	5	2
2	3	5	2
		4	4

Insects

1cm cricket

1cm roach

4mm cricket

3mm spider

3 x 3mm hemiptera

3mm weevil

3mm cricket

1mm cricket

2 x 2mm spider

3mm leucis?

8 prey/100 (over)

Sample 4

4	4	3	5
641	4	3	4
1	+	3	7
3	7	1	3
T	+	1	3
3	3	1	2
5	1	1	3
3	1	1	3
5	1	3	2
5	3	1	3
1	3	1	3
1	4	1	
2	4	3	
3	4	3	
2	4	+	
4	4	3	
+	3	3	
1	3	3	
1	3	3	
5	+	4	
5	4	1	
5	4	4	
1	2	4	
	2		
	2		

Sample 5

1	1	5	3
1	1	4	3
4	1	4	3
3	1	3	3
3	3	3	4
4	4	3	1
3	8	4	1
3	3	4	1
7	2	3	1
3	4	2	1
3	5	2	
4	4	1	
3	4	8	
4	3	1	
1	3	3	
1	1	1	
7	3	3	
3	3	3	
1	4	4	
1	4	4	
1	8	4	

7mm Cricket  
8mm Wasp  
2mm spider  
2mm larva?

1/2

# Summary Hardware Gup

Total	pay	B	log pay
		6	2
		9	0
4.8/100 leaves		8	2
		5	2
		1	1

1.4/100  
100  
1000

total catched 8.4/100 8, 8, 14, 8, 4

total 0.4/100 3.0/100 leaves 2, 2, 5, 5, 3

catcher 1 0 0 0 0

0.2/100 leaves 1, 2, 3, 1, 1

spikes 1.6/100 leaves

Col. Up. L	total	line
	10	5
	12	5
	17	6
	0 9	0 1
	12	3
	5	0
	10 2	2
	20	3
	13	2

9/100  
100  
X=12

X=2.9

## January 16 continued

I got some data on all but de!

I saw about 10-12 Brown-bills,  
3 Parula, 10 + 34, BTRB  
2 Yellowthroats, 2 ovenbirds,  
2 Redstarts.

Intriguing Roadside include:  
R. Fox-tailed Flycatcher (white  
sassy looking bird) L.B. Mockers,  
Blue-billed Parrot (B. wing  
flashes) J. Banded Blue Mtn.  
Vireo - White-eyed Thrush

Live Foliose  
Cockpit County

1/15

Forest Area

105

55

4 mm green spider 1b

100

85

80

4 mm thin spider 1b

70

3 mm green spider 1b

100

60

670

30

2 mm green spider 1b

40

2 & 2 mm green spider 1b

40

2 mm green spider 1b

200

70

75

1170

40

50

4 mm green spider 1b

60

56

80

1000

65 2mm black spider 1b

80

100 4mm black spider 1b

100

30

20

1900

200

35

1mm green spider 1b

72

105

140

4mm thin spider 1b

200

2500

Vine Tangle

80 1mm spider 1b

100

40

90

130 2 x 1mm spider 1b

85

80 2mm green hairy spider

500

3mm thin spider 1b

100

4mm green hairy spider 1b

10 4mm green hairy spider 1b

110

120

1000

130

15+ veg and white hemp in nest

160

100

140

1530

100 3mm size spider

140 - 3mm green hemp in lb

46 3x 3mm hemp lb

under ① for some bark

70

3mm hemp lb

200

2080

50

170

135

70

2500

40

110

20

Recd

40

200

60

10

100 - 3mm thin spur 1 lb

3040

200

100

100

3mm green spur 1 lb

75

4mm thin spur 1 lb

110

3630

70

9mm thin spur 1 lb

3mm seen spur

160

3mm white winged hump 1 lb

100

30

Recd

40

8mm F. J. J. 1 lb

1mm spur 1 lb

4060

100 - 1mm red + yellow spur 1 lb

160

4mm spur 1 lb

100

100

0

150

150

70

2mm seen spur + 1 lb

100

125

25

16 (1 lb - 1500 - 125)

17 May / 6

#3 (Lupinus (conty) pr. Lave)

6	3	3	3	8
4	3	2	3	5
6	3	4	4	6
4	3	5	3	4
4	1	3	3	4
4	1	7	3	8
2	5	7	5	7
2	5	4	5	5
4	6	4	2	5
3	5	3	2	12-11
5	4	6	2	12-11
4	3	1	1	6mm beetle
2	1	7	3	1mm beetle
6	1	8	4	2x 6mm spider
3	1	3	3	2x 8mm beetle
5	1	8	4	8mm spider
5	1	8	3	4mm spider
4	5	5	3	4mm spider
3	5	3	4	2x 4mm beetle
8-10	5	3	4	3mm spider
		4		3mm rock bug

12/5  
 2mm rock bug  
 5mm spider  
 3mm beetle  
 3mm rock bug

Sample #1

8	8	3	3
8" core	10 core	4	2
3	6	12	12 core?
1	5	3	3
1	5	3	7
3	5	3	2
3	5	3	2
8	2	3	4
5	8 core	3	3
4	1	5	12-11
4	1	3	1mm beetle
5	2	3	6mm beetle
8	3	3	6mm beetle
5	4	2	5mm beetle
5	4	3	5mm beetle
10-11	4	2	1mm beetle
5	4	2	6mm spider
4	4	4	3mm rock
5	3	5	4mm rock
4	3	2	4mm rock
5	3	2	3mm spider
4	3	2	3mm rock
	3	3	2mm rock

12/5  
 2mm spider  
 3mm beetle  
 2mm rock

4	6	3	3	2
3	5	3	3	2
3	8	3	2	3
3	5	4	2	3
3	4	3	2	3
4	6	8	1	2
3	5	8	1	2
4	4	4	3	1
3	3	3	3	1
5	4	7	2	1
4	2	5	2	1
3	2	5	2	1
3	2	3	2	1
5	3	3	3	1
4	2	3	2	1
4	2	3	2	1
3	2	2	1	1
3	4	2	1	1
8	3	2	1	1
4	3	2	1	1
6	3	3	1	1
6	3	3	1	1

2\*2mm  
dec 6.3

7mm  
sunny  
b-f

7mm 3mm beetle  
 5mm 3mm wasp  
 10mm 10mm

4	7	7	5
3	12	5	3
5	5	4	3
5	4	8	3
3	2	5	3
3	6	4	4
4	3	3	4
3	3	2	4
3	2	8	4
3	2	6	3
3	3	5	4
3	3	4	4
1	3	3	3
2	3	3	2
2	2	3	2
2	3	2	2
2	4	2	2
3	4	2	1
3	4		
3	7		

 $\frac{5}{10}$

Sample 7

[illegible]

### Life Transcription

January 4 F No data \* Rockland

)

U - AM3

Strong - weak relation - nodes

Pl. R. - Est. H. 20p

WFW - no date      R. L. H. B. B. B.  
in 10-1-1988  
to up - 20-1-1988  
forest

January 7 - Wilson Ave. 1st St.

2 } 100  
y-12

12

3-10

1906

Answer provided 3 4  
and  
in

Johnston, J. C.

2. Intermittent flow

no other change

5. - dense w. light. ind.

p.k. 70 88' 1-16-1975

23.12.11

Prob into 7-9

§' denoted lines

6.  $\frac{1}{2}$  cup sugar (white) 3" ~~white~~ plus 3"

2. Mc 4, 18

30

$$t_{\text{travel}} = 10 \text{ sec}$$

kernel - 1D scan  
 kernel - 2D scan - finished  
 something

Long Island Sound

[illegible]

2. 20' 4. 10'

(5)

has spread down 3' 15"

13"  $\left\{ \begin{array}{l} \text{SH} \\ \text{41, 6 10} \end{array} \right\}$  fl 10'

4255

dundung 3<sup>te</sup> m.

7 Dec 15 20

Total: 5

probe des Last  $\frac{1}{2}$

Page 14 Hardware Corp

1. Total no. of marks 287/25 marks

Drives from 1st to 3rd - heavy rain

10" (1-1 1/2" x 1-1/2")

2

Putnam Fund

3. Interlocking

The Fund

3/25

Tree fern 1m - 3'

2. Longwood

# Heavy Iron

12

R. 2.

$$\frac{f_{\text{top}}}{f_{\text{total}}} = \frac{1}{3}$$

Per. 1901

Track = 3

Pr. Fe.

12-24

Trans - 10' 0"

the other is for the 1st

Tribun Land Survey (March 1) 2000

proton +  $\pi^-$  into  $\pi^0 + \pi^0$

Can found

Pink Gen Int (round girth)

Pink bark spreading

3" dark inf (tree girth)

sh sh fl 4' sh sh 3 sec

fl 2' sh sh fl 3' 3'

Trail = 32 sec

upside down 8" PCL poke

Red Gen Int - brown peak poke

1 sec trail

Pink Gen Int poke 1"

PCL (3") pink

PCL 3" pink

2 sec trail

PCL 3" pink

Trail = sh sh sh sh (tree bark) = 2'

big down pink PCL p

sh, sh ?

Trail sh, sh sh sh sh = 10 sec

Red Gen Int 3 sec

Red Gen Int 5 sec rattle

big down ↗

sh sh, sh sh ?

3 20/25 no foraging

4 10'/35' lean against rough bark

lean twig

(Brown + white bark)

January 12 Herring Gap (to head + w gap)

1. ~~No data~~ to probe dist. trail = (around  
at base of tree trunk  
pink)  
solid - y

2. 25/1

chased 5 sec trail

long out - suddenly like

Brown + white

perpendicular to bark

30' watch for close neighbors

(listen for tree to twig)

3. watch + tree gap  
1/10 + 1

4

25/35-40

Penn UT

long, loose string (blue/black)  
pull

Aradulid line Ch, found in  
3' one end of line

3 seconds

pull led to 3"  $\nearrow$

5 25/45 Open - moderate velocity

two }  
two } line  
two }

3" down horizontal - back - 4 ft long  
pull of 10 ft up/down

January 14 - H-dur 5-8

1. P-10 Blue - loose, thin strip

loose group

pulling up on line down (10" x 1" beamed)  
pull - dead line

drop down

3' long  
long thin  
up

2

long  
upside down - loose string

long horizontal black (black/blue)

top of 2 small trees (upside down)

25/35

3 seconds pull - one at 10 ft  
line

pull at one  
pull at one (D-number)  
3 seconds pull

pull at one  
pull at one  
of 5'

drop at back of string

(white Arrow - black blue)

1st wonder how

2. In our  $T'$  no firing of  $\alpha$  at

3. Put 25/100 into 1000 ml

glen VT 1000  
by 2' 10" 1000

Dec 31 3.00

1000

$P_1(P_2) = 3.00$

frucht = 3

1944-1945 from Dec

sk sk sk sk

Other of the line

teacher

$$56.125 \text{ k} = 56125 \text{ N}$$

pick at the time ? with

$$C_0 = 1136 + 11$$

Revised date - 1 May 1966

07.02.2017

V. d. v. d. A. b. c.

1000

DL 5 0-11

7

Don't forget to fill in the fields

Korollar 4.10.2. Sei  $\mathcal{A}$  ein  $\mathcal{A}$ -Modul. Dann gilt:

R. H. H. 217.1-02 1050

Little from top (1 hour) 10 sec

hence  $\alpha = 0.1$  DCL = 4' 20" CC

$\log_{10} \frac{1}{\lambda} = \log_{10} \left( \frac{1}{\lambda_0} + \frac{v^2}{c^2} \right)$

1.  $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

→ long, narrow small

frucht. + -p. d. d. n

JK (Case - 1)

his mother - PCL 1200

$10, 20, 30, 40, 50, 60, 70, 80, 90, 100$

DEL 2 page 4. (7)

upside down

3' DE 3.00

5' below bottom boundary 50' to

1917-18, 1918-19, 1919-20, 1920-21, 1921-22, 1922-23, 1923-24, 1924-25, 1925-26, 1926-27, 1927-28, 1928-29, 1929-30, 1930-31, 1931-32, 1932-33, 1933-34, 1934-35, 1935-36, 1936-37, 1937-38, 1938-39, 1939-40, 1940-41, 1941-42, 1942-43, 1943-44, 1944-45, 1945-46, 1946-47, 1947-48, 1948-49, 1949-50, 1950-51, 1951-52, 1952-53, 1953-54, 1954-55, 1955-56, 1956-57, 1957-58, 1958-59, 1959-60, 1960-61, 1961-62, 1962-63, 1963-64, 1964-65, 1965-66, 1966-67, 1967-68, 1968-69, 1969-70, 1970-71, 1971-72, 1972-73, 1973-74, 1974-75, 1975-76, 1976-77, 1977-78, 1978-79, 1979-80, 1980-81, 1981-82, 1982-83, 1983-84, 1984-85, 1985-86, 1986-87, 1987-88, 1988-89, 1989-90, 1990-91, 1991-92, 1992-93, 1993-94, 1994-95, 1995-96, 1996-97, 1997-98, 1998-99, 1999-00, 2000-01, 2001-02, 2002-03, 2003-04, 2004-05, 2005-06, 2006-07, 2007-08, 2008-09, 2009-10, 2010-11, 2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17, 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-23, 2023-24, 2024-25, 2025-26, 2026-27, 2027-28, 2028-29, 2029-30, 2030-31, 2031-32, 2032-33, 2033-34, 2034-35, 2035-36, 2036-37, 2037-38, 2038-39, 2039-40, 2040-41, 2041-42, 2042-43, 2043-44, 2044-45, 2045-46, 2046-47, 2047-48, 2048-49, 2049-50, 2050-51, 2051-52, 2052-53, 2053-54, 2054-55, 2055-56, 2056-57, 2057-58, 2058-59, 2059-60, 2060-61, 2061-62, 2062-63, 2063-64, 2064-65, 2065-66, 2066-67, 2067-68, 2068-69, 2069-70, 2070-71, 2071-72, 2072-73, 2073-74, 2074-75, 2075-76, 2076-77, 2077-78, 2078-79, 2079-80, 2080-81, 2081-82, 2082-83, 2083-84, 2084-85, 2085-86, 2086-87, 2087-88, 2088-89, 2089-90, 2090-91, 2091-92, 2092-93, 2093-94, 2094-95, 2095-96, 2096-97, 2097-98, 2098-99, 2099-00, 2100-01, 2101-02, 2102-03, 2103-04, 2104-05, 2105-06, 2106-07, 2107-08, 2108-09, 2109-10, 2110-11, 2111-12, 2112-13, 2113-14, 2114-15, 2115-16, 2116-17, 2117-18, 2118-19, 2119-20, 2120-21, 2121-22, 2122-23, 2123-24, 2124-25, 2125-26, 2126-27, 2127-28, 2128-29, 2129-30, 2130-31, 2131-32, 2132-33, 2133-34, 2134-35, 2135-36, 2136-37, 2137-38, 2138-39, 2139-40, 2140-41, 2141-42, 2142-43, 2143-44, 2144-45, 2145-46, 2146-47, 2147-48, 2148-49, 2149-50, 2150-51, 2151-52, 2152-53, 2153-54, 2154-55, 2155-56, 2156-57, 2157-58, 2158-59, 2159-60, 2160-61, 2161-62, 2162-63, 2163-64, 2164-65, 2165-66, 2166-67, 2167-68, 2168-69, 2169-70, 2170-71, 2171-72, 2172-73, 2173-74, 2174-75, 2175-76, 2176-77, 2177-78, 2178-79, 2179-80, 2180-81, 2181-82, 2182-83, 2183-84, 2184-85, 2185-86, 2186-87, 2187-88, 2188-89, 2189-90, 2190-91, 2191-92, 2192-93, 2193-94, 2194-95, 2195-96, 2196-97, 2197-98, 2198-99, 2199-00, 2200-01, 2201-02, 2202-03, 2203-04, 2204-05, 2205-06, 2206-07, 2207-08, 2208-09, 2209-10, 2210-11, 2211-12, 2212-13, 2213-14, 2214-15, 2215-16, 2216-17, 2217-18, 2218-19, 2219-20, 2220-21, 2221-22, 2222-23, 2223-24, 2224-25, 2225-26, 2226-27, 2227-28, 2228-29, 2229-30, 2230-31, 2231-32, 2232-33, 2233-34, 2234-35, 2235-36, 2236-37, 2237-38, 2238-39, 2239-40, 2240-41, 2241-42, 2242-43, 2243-44, 2244-45, 2245-46, 2246-47, 2247-48, 2248-49, 2249-50, 2250-51, 2251-52, 2252-53, 2253-54, 2254-55, 2255-56, 2256-57, 2257-58, 2258-59, 2259-60, 2260-61, 2261-62, 2262-63, 2263-64, 2264-65, 2265-66, 2266-67, 2267-68, 2268-69, 2269-70, 2270-71, 2271-72, 2272-73, 2273-74, 2274-75, 2275-76, 2276-77, 2277-78, 2278-79, 2279-80, 2280-81, 2281-82, 2282-83, 2283-84, 2284-85, 2285-86, 2286-87, 2287-88, 2288-89, 2289-90, 2290-91, 2291-92, 2292-93, 2293-94, 2294-95, 2295-96, 2296-97, 2297-98, 2298-99, 2299-00, 2300-01, 2301-02, 2302-03, 2303-04, 2304-05, 2305-06, 2306-07, 2307-08, 2308-09, 2309-10, 2310-11, 2311-12, 2312-13, 2313-14, 2314-15, 2315-16, 2316-17, 2317-18, 2318-19, 2319-20, 2320-21, 2321-22, 2322-23, 2323-24, 2324-25, 2325-26, 2326-27, 2327-28, 2328-29, 2329-30, 2330-31, 2331-32, 2332-33, 2333-34, 2334-35, 2335-36, 2336-37, 2337-38, 2338-39, 2339-40, 2340-41, 2341-42, 2342-43, 2343-44, 2344-45, 2345-46, 2346-47, 2347-48, 2348-49, 2349-50, 2350-51, 2351-52, 2352-53, 2353-54, 2354-55, 2355-56, 2356-57, 2357-58, 2358-59, 2359-60, 2360-61, 2361-62, 2362-63, 2363-64, 2364-65, 2365-66, 2366-67, 2367-68, 2368-69, 2369-70, 2370-71, 2371-72,

\_\_\_\_\_

1/17 transcript (out of order)

① 25 VT edge → open tree Ch. 1.1

T = 5 sec

1" DCL probe

② T = 4 sec

3" DCL probe

4" DCL h. & probe 3 sec

3" DCL 3 sec

③

② 3" DCL h. 4 sec

3 sec  
5 sec  
1 sec  
1 sec

Branches from h. sideways h. 13 sec

T = 12 sec (sh. up, 1 fl)

3" DCL knock down 3 sec

3" DCL 3 sec probe

sh. TWA T = 7 sec

Branches h. & probe = 3 sec

5" h. down 10 sec

8" DCL h. on side 7 sec

T = 4 sec

④

leg

T = 5 sec

Branches from h. 5 sec h. 1 sec

③ Dense  
Vine h. 10' up 1 sec Army

T = sh. h. 6 sec

DCL probe 3 sec

(Vine - h. 3 sec) T = 7 sec

T = 7 sec

DCL 5' 6 sec

T = 7 sec

3" DCL = 3 sec

T = 5 sec

Vine probe h. 2 sec

2" DCL h. probe 1 sec

6" DCL 1 sec

Knock down 6" DCL 1 sec

Vine probe 2" DCL h. 1 sec

T = 12 sec

2' PCL peak loc.

○ Drive water 15' up - into h. h. cavity

(4)

T = 3 sec

the peak

last of peak sec

T = 4 sec

the last bit - peak loc

1' 6" PCL = 15 sec

1" OCL 1 sec peak

playing a claw at thick foliage

T = 8 sec

2" PCL pull 2 sec

5" yellow "live" loc track up to it

T =

Open underfoot

(+)

peak 1' PCL 4 sec

peak 2' PCL

T = 1 sec  
played DCL 3 sec

hug in ~~the~~ and 2 sec

T = ~~5 sec~~ 10 sec

peak at lower tip 1 sec

T = 10 sec

Demanded (help 1st) - peak at 5 sec

" 3 sec

T = 5 sec

played hel-t 3 sec pos

(+)

sh, sh, 4' 5' PCL 10 sec

peak 4 sec

sh 4 sec = T

hang down a chain reaching in twig

(+)

peak 2" PCL 1 sec

T = 3 sec

hug + play 3" PCL

hug peak 2' PCL 5 sec

hug + probe closer 5" PCL = 12 sec

peak (+)

hug sideways 2 sec

T = sh, fl 3" len 1.5  
hanging upside down = 25"  
fl 3" x 3"

DCL 3" 3 sec

DCL 3" 3 sec

T = 5 sec

push at pt. of fl 1.5" 10 sec  
↑ hanging upside down  
3" DCL ↑ ?

T = 3 sec

push ~~at~~ DCL angled 1.5" 3 sec

3" dater hanging (upside down) = 15 sec

(6)

DCL hanging upside down 3" 2 sec

DCL 1" 1 sec

T = 3 sec

probe BCL 3" 4 sec

3" DCL - probe

3" DCL hanging upside down 3 sec

3" DCL 3 sec

3" DCL 2 sec hanging down

3" DCL 2 sec gap

3" DCL 3 sec

probe 3" DCL

hanging upside down in p.m. 4 sec DCL 1"

T = 3 sec

3" dater hanging (hanging upside down) 2 sec

3 sec = 5

3" DCL probe

T = 10 sec (hanging upside down)

probe 1" DCL 1 sec

T = 3 sec

4" DCL probe ?

(7)

T = sh, sh

found  
deterioration  
10'

DCL 3" probe 4 sec 20 sec

T = 15 sec

hanging upside down 7" DCL

fun

T = 8 sec

20'  
open

probe frame below 3" DCL 3 sec

" " " 4" DCL 2 sec

T = 1/2 sec 3" DCL hanging 4 sec

hanging off same dater ↑

T = 1 sec

hanging on 7" 1" dater & hanging down

7" 1" dater hanging side 20 sec.

T = 2 sec

3" OCL peak 2 sec

1" OCL peak 1 sec

high upstroke down 2" OCL (in line) 1 sec

peak at 1/2 OCL ?

T =

(8)

Peak 3 sec at 2 sec

T = 10 sec

Peak 1 OCL 1 sec

T = 1 sec

Peak 4" OCL also

high upstroke down 12 sec

OCL 3" gap 4 sec 5 sec

long

T = 2 sec

OCL = 3" high + 2 sec

peak at bottom

(+)

entirely  
down

T = 1 sec

peak 1" OCL 1 sec

3" OCL 1 sec

T = 4 sec

peak at bottom 1" OCL 7 sec

T = 4 sec

1" OCL peak ?

high upstroke down 5" OCL 6 sec. (+)

T = 8 sec

peak at 1/2 sec?

T = 4 sec

peak at 1/2 sec of 4" low 6 sec

+

1/1 T window cover introduced  
by 2 Dec left rest to 2 Dec 1968 35-40 sec more

T = 5 sec

pull on trail (11 sec)

T = 1 sec

pull on h. f. h. p. c. l. 4" 1 sec

pick p. c. l. 3"

p. c. l. 4" h. g. s. c. l. = 12 sec  
h. g. up. a. d. o. n.

T = 10 sec

h. g. up. a. d. o. n. p. c. l. 4" 10 sec

④ 20' up PVT hole No Run

5 forest 35'

pick at twig 3 sec

T = 20

pick p. c. l. 3" 1 sec

upside down on branch - pull on twig <sup>in dead</sup>

T = 14 sec

pick at line twig  
~~~~~

T = 12 sec

probe at base of h. g. s. c. l. 1 sec

probe 8-10" p. c. l.

probe 4" p. c. l. 6 sec

T = 5 sec

hang down pick at close 1" d. c. l.

ripping at line - w. g. s. c. l.

60 sec

hang down 8" p. c. l.

pick at top 5" p. c. l. - 1 sec

pick at low 3" p. c. l. 1 sec

hang sideways pick 3" p. c. l. - g. p. c. a. s. l. 4  
8 sec

1/11 (5) contact 30-40/60-65

~~30~~ Vine irregularity - probe 10 sec

Vine peck 2 sec

hang down + probe PCL 5 sec  
(rip)

T = 5 sec

hang down probe PCL 2 sec

peck PCL 2" - 1 sec

5 sec trail

peck PCL 2" - 1 sec

T = 2L

hang down peck PCL (+?) chased slightly ⊕

PCL 7" peck from below 15 sec

T = 12 sec

approach back?

tail { hang up, down - move  
peck at vine irregularity

T = 3 sec

peck on PCL 3" 1 sec.

T = 8 sec

peck 3" PCL 1 sec

peck 5" PCL 1 sec

T = 15 sec

⊕ ↓ 10 sec trail  
outst?

hang upside down 3" PCL

6) 25/50' fence

7)

acropetal

hang upside down ⊕

12"

from top

120 sec

upside down on side

25'/50'

mod VT solitary

5, 4, 3, 1

right side up

8 - 25' DUT

9

2 small 3 peck  
PCL

40' DUT

T = 3 sec PCL

poke 2" ~~leaf~~ 1 sec

T = 1 sec

poke 4" ~~leaf~~ PCL 1 sec

high up down

T = 1 sec

poke 3" PCL from below Bee

T = 7 sec

poke 3" PCL 10 sec

poke 2" 2 sec

T = 10 sec

?

T = 3 sec

high on bottom of leaf. last c' ~~10~~ 10 sec

" " " " "

upside down in petiole

light up & really in leaf section

apparently 10 sec

top of leaf goes into it

goes into ~~the~~ crevices in leaf

120 sec

sideways high 3" <sup>PCL</sup> leaf 4 sec

T = 3 sec

poke PCL 4" ?

two - high up & down + poke - 2 sec

T = 22 sec

4" PCL - high, sideways 3 sec

T = 9 sec

poke down 4" PCL 3 sec

T = 1 sec

high down goes into 4" PCL 3 sec

T = 10 sec

①

30' high up & down on distal leaf

50'

10 sec = T

high up & down on old bristled leaf 5 sec

T = 2 sec

high up & down on twig

Bristled Branch

high sideways + poke PCL 7" - 2 sec

T = 12 sec

high sideways on Bristled Branch 3 sec

WEL ?

probe den DCL 3"

Epiphyte Den (area) 2100 20" lens on  
Epiphyte

Old Epiphyte lens = 1800 sec  
at base of

high sun w/ 2 probe 5" PCL

probe into bark

probe 3" PCL


probe at 2" diameter branch

T = 3000

probe at twig 1000

high up on trunk & probe PCL 3" 4000

T = 300

high + probe at 

enclosed 3" hole

probe PCL 2"

probe PCL 4"

T = 5000

probe - PCL 1" 3000

T = 5000

probe PCL 10" (high) = 15000

T = 10000

probe 3" PCL 1000

probe 3" PCL 3000

T =

(3) vertical line 1000

probe 3" PCL from top 2000

15/40"  
put

high 1" PCL 3000

probe at bark of twig 5000

T = 3000

probe 4" PCL ?

probe 4" PCL 10000

T = 1000

high from unit

T = ~~7000~~ 18000

high + probe 2" PCL

probe 3" PCL

T = 14 sec

probe in clustered vine foliage 3 sec

T = 12 sec

Branches dead leaves 6 sec

(4) - long 3" PCL 2 sec

hy + pick 5' pcc 2 sec

T = 10 sec

hy + pick at top 2 sec

hy + female pick at bottom 4' pcc

T = 7 sec

pick + size bottom at 3" PCL 3 sec

T = 6 sec

pick at vine foliage in vine ~~2 sec~~ 15 sec

T = 1 sec

pick at dead top 6 sec (+)

(5) POT

20'  
Mixed  
Flock

pick at vine

12" vine pick 10 sec  
2 sec T

probe bottom pcc 3"

probe pcc 2" 3 sec

T = 2 sec

~~probe into mass~~

3" PCL long + pick (+)?

15 sec

pick at top 2 sec

T = 3 sec

glue clustered vine foliage

T = 6 sec

pick at vine 3 sec

T = 9 sec

pull at vine 2 sec

T = 10 sec

pick at vine 1 sec

T = 10 sec

pick at vine 1 sec

T = 6 sec

pick at 2" pcc 1 sec

T = 7 sec

pick up plant in Bill + sm. ant. +  
hitting at it 10 sec.

(+)  
worm?  
1 cm

T=10 sec

hang upside down

DCL 2" 3 sec

T=8 sec

pick DCL 4" 2 sec

hang in DCL 3 sec

hang pick at 1" DCL 3 sec

⑥ pick at tent?

so for 243  
man

① Transcript June 18

① back

pick 8" DCL (rip) = 40 sec

T=?

give wire 3 sec

give wire 2 sec

T=2 sec

hang upside down 10 sec

T=3 sec

hang up + down

T=4 sec

hang + pick up

hang + pick 3" DCL 2 sec

T=4 sec

hang upside down pick + pick at wire

hang pick down pick at wire

hang 4 sec

T=4 sec

hang + pick at directed location 6" 2 sec

T=2 sec

hang upside down 4" DCL 3 sec

pick at 3" DCL from below 3 sec

pick into 4" DCL 2 sec

T=

sideways hang 10" ~~2"~~ 12 sec

pick high back (hammer and eye)

wire back 2" thick

hang upside down 120 sec

T = ?  
push ~~down~~ <sup>vine?</sup> ~~DEL~~ = 53 sec.

but

② push 4" DCL 1 sec  
T = ?

checked a Redstart

DU underwing

③ T = 2 sec  
push into top (crucial) leaf 2 sec

25' put

T = 2 sec

push into 2" DCL

push down 3" DCL 2 sec

push 5" DCL 1 sec

T = 18 sec

push 2" DCL 2 sec

push 2" DCL 2 sec

push from below 3" DCL 1 sec

T = 5 sec

high push at top of vine

T = 2 sec

push at 5" DCL 1 sec

T = 16 sec  
hang down check 4" DCL

hang down check 5" DCL <sup>flash</sup> → ④ ? 5 sec

T = 13 sec

hang push at 4" (thick) 3 sec

T = 6 sec

push at 3" DCL from below

T = 8 sec

hang from vine top push (low, low, 1 push)  
T = 8 sec

T = 2 sec

waited under ~~that~~ dead leaves on branch  
1 sec

T = 10 sec

push 5" DCL

T = 2 sec

push 2" DCL 2 sec

T = 2 sec

push 3" DCL

T = 5 sec

knocked down 2 (over)

pick 2" PCL

T = 4

pick 3" PCL → 4 sec

hanging — 1.5 sec

pick 2" PCL 3 sec

(+)  
5 sec

flung back at bench 2 sec

T = 4 sec

pick at twig 8 sec  
run ball along twig

(4)

pick 1" PCL 2 sec

3T/4 sec

T = 3 sec

over

pick 1" PCL

→

T = 1.5 sec

pick 4" PCL 1 sec

hanging pick 1" PCL 6 sec

T =

hanging 8" PCL ?

hanging 3" PCL 2 sec

hanging 1" PCL 3 sec

T = 2 sec

pick PCL

T = 1.5 sec

pick 1" PCL 5 sec

pick Dressed 1/2 leaf 1 sec

pick bottom 1/2 of 2" PCL  
(hanging +)

pick at bench

pick PCL 4" 3 sec

check PCL 4" 1 sec

T = 1.5 sec

pick flat bottom green leaf 1 sec

pick into 3" PCL — grab hanging +  
graphed leaf 8 sec

T = 6 sec

pick 2" PCL 2"

T = 1.5 sec

pick 1" PCL 2 sec

(see previous page)

Co. & Country - Sample # 8

|   |    |   |   |   |
|---|----|---|---|---|
| 3 | 5  | 6 | 4 | 3 |
| 2 | 6  | 7 | 4 | 2 |
| 2 | 3  | 4 | 3 | 2 |
| 4 | 3  | 4 | 3 | 3 |
| 4 | 3  | 3 | 3 | 3 |
| 4 | 10 | 3 | 3 | 2 |
| 2 | 4  | 3 | 3 | 2 |
| 2 | 4  | 3 | 3 | 3 |
| 3 | 4  | 3 | 3 | 4 |
| 3 | 4  | 3 | 2 | 3 |
| 3 | 2  | 2 | 2 | 3 |
| 3 | 2  | 2 | 2 | 3 |
| 6 | 3  | 3 | 3 | 3 |
| 4 | 3  | 3 | 3 | 2 |
| 3 | 2  | 3 | 3 | 2 |
| 3 | 3  | 3 | 3 | 3 |
| 4 | 3  | 3 | 3 | 3 |
| 3 | 3  | 3 | 3 | 3 |
| 3 | 3  | 3 | 3 | 3 |
| 4 | 3  | 3 | 3 | 3 |

4mm scorpion  
3mm spider  
2+3mm  
rock

16/5

1mm spider  
2x 3mm spider  
3mm spider  
2x 2mm spider

1.3 cm cricket  
1 cm spider  
1 cm spider  
5 x 3 mm spider  
2 x 4 mm spider  
4 mm spider  
4 mm spider

Sample 9

|        |   |   |                 |
|--------|---|---|-----------------|
| 5      | 6 | 5 | 3               |
| 3      | 8 | 4 | 3               |
| 3      | 9 | 4 | 2               |
| 2      | 5 | 4 | 2               |
| 3      | 4 | 8 | 3               |
| 3      | 3 | 9 | 3               |
| 2      | 3 | 3 | 4               |
| 3      | 6 | 3 | 3               |
| 8      | 6 | 3 | 3               |
| 5      | 6 | 3 | 3               |
| 5 core | 2 | 3 | 1               |
| 6      | 2 | 3 | 1               |
| 3      | 2 | 3 | 1               |
| 4      | 1 | 3 | 4 mm spider     |
| 3      | 1 | 3 | 4 mm spider     |
| 1      | 3 | 3 | 6 mm spider     |
| 1      | 3 | 3 | 6 mm spider     |
| 2      | 3 | 3 | 5 x 3 mm spider |
| 2      | 3 | 3 | 3 x 3 mm spider |
| 2      | 2 | 3 | 3 x 2 mm spider |
| 2      | 2 | 3 | 2 x 3 mm spider |
| 2      | 2 | 3 |                 |
| 6      | 6 | 3 |                 |

4 mm spider  
4 mm spider  
6 mm spider  
6 mm spider  
5 x 3 mm spider  
3 x 3 mm spider  
3 x 2 mm spider  
2 x 3 mm spider

19/2

1/17 transcript continued

④ 3 sec trunk  
pass at bark  
pick 2" PCC from base 2 sec  
pick 2" PCC from base 2 sec  
T = 7 sec  
pick 3" PCC from below?

4" PCC 3 sec  
T = 4 sec  
1" PCC  
pick at base 3 sec

⑤ pick 1" PCC  
T = 5 sec  
25' OP'n  
pick at top & pick = 15 sec  
long pick at  
hug on twig 3 sec  
pick 2" PCC 1 sec  
T = 3 sec  
pick at twig 3 sec  
T = 12 sec  
pick 8" PCC 1 sec

hug on bark top = digging ④  
20 sec

T = 12 sec

pick loose dead twig 6 sec

hug + pick at twig end 6 sec

hug + pick at 3" PCC 2 sec

T = 7 sec

pick hug + pick at twig  
(~~Chor~~ N. thick-like)

40 sec

④  
cracked  
1 in

T = 3 sec

pick at yellow - "live leaf" 1 sec

pick at twig 2 sec T = 1

pick at twig 1 sec T = 1

pick at twig

2 cm bark bark strip 7 sec

T = 3 sec

twig end per 1 sec

T = 7 sec

twig end per 2 sec

F. 26

per at twig

T = 5 sec

per base { 4" pcc 8 sec  
high on left }

T = 5 sec

per at ~~twig~~ tip 3 sec  
twig tip

T = 30 sec

per 1" pcc high up a down

per at twig end (+) - small  
17 sec

T = 3 sec

per tip 1" pcc 1 sec  
T = 3 sec  
per end of twig 01 sec


T = 7 sec

per at twig end

(6)

10" pcc 5 sec

T = 4 sec

2 1/4" 5" pcc (cluster) per  
forex  high down

behind 5 = 35 sec

T = 2 sec

per 2" pcc DCL? (+)  
high savings up side = 17 sec

T = 2 sec

per 5" pcc from top

high on side 13 sec

1 1/2" per per at both  
high on side 15 sec

10" pcc high down  
gipe = 3 sec  
+ 20 sec

per at twig end 2 sec

T = 3 sec

per at twig gipe in a bark  
7 sec

T = 4 sec

gape at bark (2 knob)

hang spine down  
head down creep

28 sec

①

up at

By Accord - Epiphyte probe pcc  
light at base

in group

Dense

UT

15/30

T = 9 sec

hang down probe 2" pcc 8 sec

reach - probe 2" pcc 18 sec

T = 3 sec

hang down 1 1/2 pcc 5 sec

T = 8 sec

hang down 2 sec? pcc 3"

T = 2 sec

reach 3" pcc 1 sec

T = 1 sec

probe pcc <sup>Epiphyte</sup> <sup>Leafy</sup> <sup>30"</sup>  
~~light~~ in ~~Agave~~ Epiphyte  
1.5 sec

8 probe at <sup>top</sup> end 1 sec

T = 7 sec

reach first probe 1" pcc 2 sec

T = 6 sec

reach + probe 2" pcc

hang 5.4 mgs - gape let wire bark 8 sec

T = 5 sec

hang 5.4 mgs on wire

300

643

Dry hts -  
Soft  
bodem Anthropus  
(Calypt + Lur)

~~.024~~  
~~.027~~  
~~.023~~  
~~.029~~

sum  
= .28 gm  
 $\bar{x} = 0.7$  per h

1047  
.050

1040

.075 with b, higher +  
Calypt + Lur

1.77  
1.02  
9ms

1/20 Calypt + Lur  
vine tangle insect

160

65

2 - 1.2 cm green crickets

2 -  
80

80

70

165

160

200

4 mm flycatcher - 1

300

1200

200

2 mm spider

1000

1000

1000

50

2000

200

Group with 3

Common sp. with

Three or four birds - 1/2

200

3 or 4 birds

1 or 2 birds

1000 - 1000

7/5, 000

22, 10, 000

1000

0 Jan 17, 18 + 20

I have been remiss in keeping my journal - but these 3 days I worked at the Windsor area - walking out the trail past the lake. On the 17th & 18th I collected dead leaves & 17th & 20th I collected live leaves.

Jan 17th I went from 7:30 - 3:00

18th

~~7:30~~ - 3:30

20th

8:00 - 3:30

Since I walked more or less a similar route each day  $\approx$  4 km or so, I will give an overview of bird abundances.

First the migrants. Each

day I saw 8, 7, 11 WEW respectively.

I saw 15-20 Black and wh. tees

5 Ovenbirds, 6-8 BTBs, 5-6

Parulas, & 4-5 Redstarts -

I saw roughly 50-50 ♂:♀  
BTB's.

The most interesting thing  
about the Wormer Warblers is  
that I saw few before 11:00 am.  
I invariably saw more walking  
about then out! This is not an  
artifact of lighting conditions since  
I've begun to pick them up by their  
"content" call - the this-seet-seet-seet  
they give when changing position.  
Curiously, about 50% of the  
warblers are solitary - with respect  
to all other birds - why all the  
noise when they fly. Also  
interesting - The Jamaican Blackbird  
gives similar notes when changing  
epiphytes.

The following give some rough  
numbers of resident forest birds / day:

|                               |       |
|-------------------------------|-------|
| Black-throated-bellied Cuckoo | 6     |
| Jamaican Berrard              | 0-2   |
| Red-tailed Flycatcher         | 6     |
| Yellow-crowned Elaenia        | 6-8   |
| Greater Antillean Pewee       | 15    |
| Lesser-headed Kingbird        | 15    |
| Blue Mountain Vireo *         | 5     |
| J. White-eyed Vireo           | 20-30 |
| Arrow-headed Warbler          | 8     |
| Jamaican Oriole               | 8     |
| S. H. Tanager                 | 20    |
| Orangequit *                  | 20    |

Both these birds seem to do  
a lot of dead-end chattering

Monte Bonito 1430 - clear  
Open Forest understory

30 3mm green fly lb  
16 2mm hump lb  
43 3mm green fly lb  
60 2mm hump lb  
30 3mm green fly lb

nr

3mm green fly lb  
16 4mm hump lb  
4mm th. sp. lb

25

10 4mm green sp. lb  
5mm hump lb

30 2mm sp. lb  
4mm th. sp. lb

36 2mm fly lb

240

20 2mm hump lb  
3mm hump lb  
2mm sp. lb  
15 3mm fly lb

70 2mm hump lb  
3mm sp. (th) lb

50 3mm hump lb  
3mm fly lb

450

50 3mm green fly = mark?

25

30 2x 3mm th. sp. lb  
3mm hump lb

25

13 3mm th. sp. lb  
3mm hump

510

25 3mm th. sp. lb

307

70 4mm green spur lb

35 3mm hump lb

44 4mm brown spur lb

25

40 3mm thin spur } lb  
2mm hump

25 4mm thin spur lb

70 3mm "green fly" } lb  
2mm hump

875

75

40 5mm spur lb - black spur

1000

80 2x 3mm "green fly"  
3mm thin spur

60

75

85 4mm wasp lb  
4mm thin spur lb

1275

100

60

22

1500

100

60

80 2mm fly lb  
3mm thin spur lb  
4mm thin spur lb

60 3mm thin spur lb

1770

100 - 4mm hump 1

100

150

2,000

80 2 x 3m thin sp. 1b

100

100

50

80

80

60

2,000

20 2,000 1000

100 24mm

Monte Benito 1/30 1230 clear  
fast industry

180

100 2 x 4mm hump 1b

85

70

3mm thin sp. 1b

100

3mm thin sp. 1b

50

4mm th sp. 1b

3mm thin sp. 1b

15

100

100

3mm thin sp. 1b

80

6mm rock rough hump 1b

60

2mm hump 1b

62

20

2 x 3mm thin sp. 1b

50

30

1000

100

40

(5mm spec 1b)

100

70  
120 2mm spec 1b

40

100

50

100

35

(2 x 3mm thin spec 1b)

3

60

65

1660

180

50

100

2mm spec 1b

(4mm thin spec 1b)

2000

130

4mm spec 1b

11

(4mm spec 1b)

100

160

(3mm spec 1b)

(4mm spec 1b)

110

(1 3mm spec 1b)

2500

18200

$$\begin{array}{r} 4.5 \\ \times 2 \\ \hline 9.0 \end{array}$$

$$\begin{array}{r} 5.5 \\ \times 1 \\ \hline 5.5 \end{array}$$

99

13

10

900

100

$$\begin{array}{r} 143 \\ \times 12 \\ \hline 1716 \end{array}$$

$$\begin{array}{r} 143 \\ \times 12 \\ \hline 1716 \end{array}$$

13th - 18th - 19th - 20th - 21st - 22nd - 23rd - 24th - 25th - 26th - 27th - 28th - 29th - 30th - 31st

Post. Even building  
Do. Steven M. Head

42 1/2  
23 1/2

100 ft  
J. m. c. 32/10,000  
35 ft m. c.

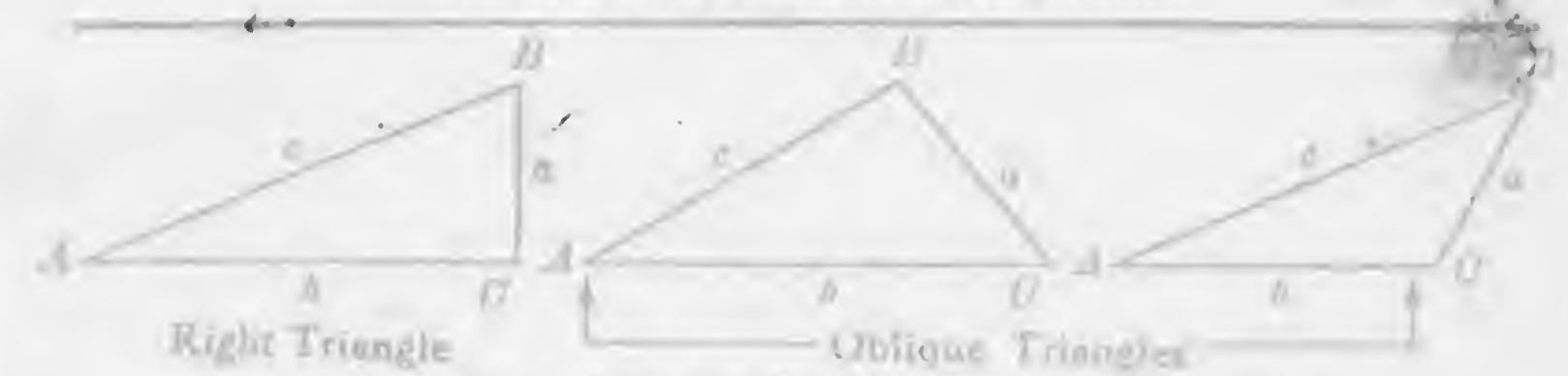
From: 100 ft m. c. 74/10,000

100 ft  
12/10  
100 ft m. c.

750 ft (m. c.) m. c. 100 ft  
100 ft m. c.

only 100 ft m. c. 75 ft m. c.

# TRIGONOMETRIC FORMULE



## Solution of Right Triangles

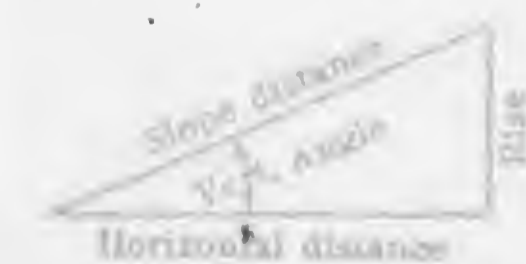
For Angle A.  $\sin = \frac{a}{c}$ ,  $\cos = \frac{b}{c}$ ,  $\tan = \frac{a}{b}$ ,  $\cot = \frac{b}{a}$ ,  $\sec = \frac{c}{b}$ ,  $\csc = \frac{c}{a}$

|       |          |                                                                                         |
|-------|----------|-----------------------------------------------------------------------------------------|
| Given | Required | Formula                                                                                 |
| a, b  | A, B, c  | $\tan A = \frac{a}{b} = \cot B$ , $c = \sqrt{a^2 + b^2} = a \sqrt{1 + \frac{b^2}{a^2}}$ |
| a, c  | A, B, b  | $\sin A = \frac{a}{c} = \cos B$ , $b = \sqrt{c^2 - a^2} = c \sqrt{1 - \frac{a^2}{c^2}}$ |
| A, a  | B, b, c  | $B = 90^\circ - A$ , $b = a \cot A$ , $c = \frac{a}{\sin A}$                            |
| A, b  | B, a, c  | $B = 90^\circ - A$ , $a = b \tan A$ , $c = \frac{b}{\cos A}$                            |
| A, c  | B, a, b  | $B = 90^\circ - A$ , $a = c \sin A$ , $b = c \cos A$                                    |

## Solution of Oblique Triangles

|            |          |                                                                                                                                                                          |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Given      | Required | Formula                                                                                                                                                                  |
| A, B, a    | b, c, C  | $b = \frac{a \sin B}{\sin A}$ , $C = 180^\circ - (A + B)$ , $c = \frac{a \sin C}{\sin A}$                                                                                |
| A, a, b    | B, c, C  | $\sin B = \frac{b \sin A}{a}$ , $C = 180^\circ - (A + B)$ , $c = \frac{a \sin C}{\sin A}$                                                                                |
| a, b, C    | A, B, c  | $A + B = 180^\circ - C$ , $\tan \frac{1}{2}(A - B) = \frac{(a - b) \tan \frac{1}{2}(A + B)}{a + b}$<br>$c = \frac{a \sin C}{\sin A}$                                     |
| a, b, c    | A, B, C  | $s = \frac{a + b + c}{2}$ , $\sin \frac{1}{2}A = \sqrt{\frac{(s - b)(s - c)}{bc}}$<br>$\sin \frac{1}{2}B = \sqrt{\frac{(s - a)(s - c)}{ac}}$ , $C = 180^\circ - (A + B)$ |
| a, b, c    | Area     | $s = \frac{a + b + c}{2}$ , $\text{area} = \sqrt{s(s - a)(s - b)(s - c)}$                                                                                                |
| A, b, c    | Area     | $\text{area} = \frac{bc \sin A}{2}$                                                                                                                                      |
| A, B, C, a | Area     | $\text{area} = \frac{a^2 \sin B \sin C}{2 \sin A}$                                                                                                                       |

## REDUCTION TO HORIZONTAL



Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus slope distance = 319.4 ft. Vert. angle = 5° 10'. From Table, Page 11,  $\cos 5^\circ 10' = .9958$ . Horizontal distance = 319.4 ft.  $\times .9958 = 318.0$  ft. Horizontal distance also = Slope distance minus slope distance times  $(1 - \cos \text{ of vertical angle})$ . With the same figures as in the preceding example, the following result is obtained:  $\cos 5^\circ 10' = .9958$ ,  $1 - .9958 = .0041$ .  $319.4 \times .0041 = 1.31$ ,  $319.4 - 1.31 = 318.0$  ft. When the rise is known, the horizontal distance is approximately = the slope distance less the square of the rise divided by twice the slope distance. Thus rise = 14 ft. Slope distance = 322.5 ft. Horizontal distance =  $322.5 - \frac{14^2}{2 \times 322.5} = 322.5 - 0.30 = 322.2$  ft.

